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## BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	Before the Examiner:
Eibach et al.	:	Poltorak, Peter
	:	
Serial No.: 09/501,756	:	Group Art Unit: 2134
	:	
Filing Date: February 10, 2000	:	
	:	
Title: SECURITY FOR	:	IBM Corporation
NETWORK-CONNECTED	:	Dept. T81/Bldg. 503
VEHICLES AND OTHER	:	P.O. Box 12195
NETWORK-CONNECTED	:	3039 Cornwallis Road
PROCESSING ENVIRONMENTS	:	Research Triangle Park, NC 27709

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**I. REAL PARTY IN INTEREST**

The real party in interest is International Business Machines, Inc., which is the assignee of the entire right, title and interest in the above-identified patent application.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellants, Appellants' legal representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-5, 7-8 and 10-11 are pending in the Application. Claims 6 and 9 were cancelled. Claims 1-5, 7-8 and 10-11 stand rejected. Claims 1-5, 7-8 and 10-11 are appealed.

#### IV. STATUS OF AMENDMENTS

Appellants have not submitted any amendments following receipt of the final rejection with a mailing date of September 8, 2006.

#### V. SUMMARY OF CLAIMED SUBJECT MATTER

##### Independent Claim 1:

In one embodiment of the present invention, a data processing apparatus for a vehicle, includes a first data processing unit (A) connected to device control units of the vehicle. Specification, page 6, line 12 – page 9, line 5; Figure 1, element 20. The data processing apparatus further comprises a second data processing unit (B) connected to a communications apparatus providing a wireless connection to an external network, such that operation requests can be received at the second data processing unit (B) from the external network. Specification, page 6, line 12 – page 9, line 5; Figure 1, element 70. The data processing apparatus further comprises a data communications link between the first and second data processing units. Specification, page 6, line 12 – page 9, line 5; Figure 1, elements 20, 70, 190. The data processing apparatus further comprises a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations. Specification, page 6, line 12 – page 7, line 16; Specification, page 9, line 12 – page 11, line 11; Figure 1, elements 50, 60, 70, 190.

##### Independent Claim 7:

In one embodiment of the present invention, a data processing apparatus, includes a first data processing unit connected to one or more security-critical resources. Specification, page 6, line 12 – page 9, line 5; Figure 1, elements 20, 60. The data processing apparatus further includes a second data processing unit connected to an external communications network such that operation requests can be

received from the external network. Specification, page 6, line 12 – page 9, line 5; Figure 1, element 70. The data processing apparatus further includes a data communications link between the first and second data processing units. Specification, page 6, line 12 – page 9, line 5; Figure 1, elements 20, 70, 190. The data processing apparatus further includes a gateway component for controlling communications across the link, the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation, wherein the first and second data processing units and the link between them are implemented within a network-connected home environment, and the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit. Specification, page 6, line 12 – page 7, line 16; Specification, page 9, line 12 – page 11, line 11; Figure 1, elements 20, 50, 60, 70, 190.

Independent Claim 10:

In one embodiment of the present invention, a method for controlling the initiation of operations relating to secure resources on a first data processing unit such that only a limited predefined set of operations can be initiated by requests from a second data processing unit connected to the first data processing unit by a communications link, the method comprises storing a list of permitted operations which can be requested from the second data processing unit. Specification, page 6, line 12 – page 7, line 16; Specification, page 9, line 12 – page 11, line 11; Figure 1, elements 20, 70, 190. The method further comprises comparing, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and only executing the permitted operations. Specification, page 6, line 12 – page 7, line 16; Specification, page 9, line 12 – page 11, line 11; Figure 1, elements 20, 50, 190.

## VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-2, 4 and 10-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nathanson (U.S. Patent No. 6,263,268) in view of Richardson et al. (U.S. Patent No. 6,427,202) (hereinafter "Richardson"). Claims 3 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nathanson in view of Richardson and in further view of Serughett ("OSEK: a super-small kernel for deeply embedded applications?"). Claims 7 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bassett (U.S. Patent No. 5,706,191) in view of Richardson or Pfleeger ("Security in Computing").

## VII. ARGUMENT

- A. Claims 1-2, 4 and 10-11 are improperly rejected under 35 U.S.C. §103(a) as being unpatentable over Nathanson in view of Richardson.

The Examiner has rejected claims 1-2, 4 and 10-11 under 35 U.S.C. §103(a) as being unpatentable over Nathanson in view of Richardson. Office Action (9/8/2006), page 10. Appellants respectfully traverse for at least the reasons stated below.

1. Nathanson and Richardson, taken singly or in combination, do not teach or suggest the following claim limitations.
  - a. Claims 1 and 10 are patentable over Nathanson in view of Richardson.

Appellants respectfully assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations" as recited in claim 1. The Examiner cites column 5, lines 49-59 of Richardson as teaching the above-cited claim limitation. Office Action (9/8/2006), page 10. Appellants respectfully traverse and assert that Richardson instead teaches that an

enabler is arranged in between one of the lines of decoded instructions from the decoder that are input into the CPU. Column 5, lines 49-52. There is no language in the cited passage that teaches a gateway component for controlling communications across the data communications link. Neither is there any language in the cited passage that teaches a gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units. Neither is there any language in the cited passage that teaches a gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 1, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "storing a list of permitted operations which can be requested from the second data processing unit" as recited in claim 10. The Examiner has not specifically addressed this limitation. In order to establish a *prima facie* case of obviousness, the Examiner must cite a prior art reference or combination of prior art references that teaches or suggests all of the claim limitations. M.P.E.P. §2143. Since the Examiner has not addressed this claim limitation, the Examiner has not established a *prima facie* case of obviousness in rejecting claim 10. M.P.E.P. §2143.

Appellants further assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "comparing, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations" as recited in claim 10. The Examiner has not specifically addressed this limitation. In order to establish a *prima facie* case of obviousness, the Examiner must cite a prior art reference or combination of prior art references that

teaches or suggests all of the claim limitations. M.P.E.P. §2143. Since the Examiner has not addressed this claim limitation, the Examiner has not established a *prima facie* case of obviousness in rejecting claim 10. M.P.E.P. §2143.

Appellants further assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "only executing the permitted operations" as recited in claim 10. The Examiner has not specifically addressed this limitation. In order to establish a *prima facie* case of obviousness, the Examiner must cite a prior art reference or combination of prior art references that teaches or suggests all of the claim limitations. M.P.E.P. §2143. Since the Examiner has not addressed this claim limitation, the Examiner has not established a *prima facie* case of obviousness in rejecting claim 10. M.P.E.P. §2143.

- b. Claims 2, 4 and 11 are patentable over Nathanson in view of Richardson for at least the reasons that claims 1 and 10, respectively, are patentable over Nathanson in view of Richardson.

Claims 2 and 4 each recite combinations of features of independent claim 1, and thus claims 2 and 4 are patentable over Nathanson in view of Richardson for at least the reasons that claim 1 is patentable over Nathanson in view of Richardson.

Claim 11 recites the combinations of features of independent claim 10, and thus claim 11 is patentable over Nathanson in view of Richardson for at least the reasons that claim 10 is patentable over Nathanson in view of Richardson.

- c. Claim 2 is patentable over Nathanson in view of Richardson.

Appellants respectfully assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "wherein the first data processing unit (A) is adapted to store in an unmodifiable form a list of said predefined set of permitted operations and includes a gateway component for comparing all operation requests received from the second data processing unit (B) with the list of permitted

operations, and then to pass the permitted operation requests to respective ones of said device control units and to discard non-permitted operation requests" as recited in claim 2. As understood by Appellants, the Examiner admits that the combination of Nathanson and Richardson do not teach the above-cited claim limitations. Office Action (9/8/2006), page 11. As further understood by Appellants, the Examiner asserts that these limitations are well-known and that it would have been obvious to modify the combination of Nathanson and Richardson to include the above-cited claim limitations because of "the benefit of saving unnecessary use of resources." *Id.* Appellants respectfully traverse.

Appellants traverse the assertion that the above-cited claim limitations are well known. Appellants had requested the Examiner to provide a reference that teaches all of the above-cited claim limitations pursuant to M.P.E.P. §2144.03. The Examiner, in turn, refused asserting that it is Appellants' burden to show to the contrary. Office Action (9/8/2006), pages 2-3. Appellants' do not have the initial burden to prove that the claimed invention is patentable. Instead, the Examiner has the burden of establishing a *prima facie* case of obviousness which includes providing a reference or combination of references that teaches or suggests all the claim limitations. M.P.E.P. §§2142-2143. The Examiner has not met that burden.

Appellants respectfully assert that the Examiner's use of Official Notice is inappropriate. The Examiner is only to use Official Notice for facts asserted to be well-known or to be common knowledge in the art that are capable of instant and unquestionable demonstration as being well-known. *In re Ahlert*, 424 Fd.2d 1088, 1091, 165 U.S.P.Q. 418, 420 (C.C.P.A. 1970); M.P.E.P. § 2144.03. In this case, the facts asserted to be well-known or to be common knowledge in the art are not capable of instant and unquestionable demonstration as being well-known. Further, it is not appropriate for the Examiner to take Official Notice of facts without citing a prior art reference where the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known. *In re Ahlert*, 424 Fd.2d at 1091,

165 U.S.P.Q. 420-21; See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 U.S.P.Q. 57, 63 (C.C.P.A. 1979). Further, it is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as principle evidence upon which a rejection was based. *In re Zurko*, 258 F.3d 1379, 1385, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001). Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 2.

Further, the Examiner asserts that the limitations of claim 2 must be inherent in Richardson; however, the Examiner does not provide any evidence except that according to the Examiner, it must occur or otherwise the stability to the system would be threatened. Office Action (9/8/2006), page 5. This is not evidence. The Examiner does not even address the limitations of claim 2. Claim 2 recites "wherein the first data processing unit (A) is adapted to store in an unmodifiable form a list of said predefined set of permitted operations and includes a gateway component for comparing all operation requests received from the second data processing unit (B) with the list of permitted operations, and then to pass the permitted operation requests to respective ones of said device control units and to discard non-permitted operation requests" and not simply "discarding non-permitted operation requests." *Id.* Hence, the Examiner has not provided any evidence that the limitations of claim 2 are well known in the art.

Further, as stated above, the Examiner's motivation for modifying Nathanson and Richardson to include the above-cited claim limitations is "the benefit of saving unnecessary use of resources." The Examiner has not provided a source for his motivation for modifying Nathanson and Richardson to include the above-cited claim limitations. The motivation to modify Nathanson and Richardson must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Appellants respectfully request the Examiner to point out which of these sources is the source of



the Examiner's motivation<sup>1</sup>. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 2. *Id.*

Further, the Examiner's motivation does not provide reasons, that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitations of claim 2. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 2. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

d. Claim 4 is patentable over Nathanson in view of Richardson.

Appellants respectfully assert that Nathanson and Richardson, taken singly or in combination, do not teach or suggest "wherein the second data processing unit (B) is adapted to store one or more access control lists defining which operation requests

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<sup>1</sup> Appellants feel it is very important for the Examiner to point out the source of the Examiner's motivation because it appears to Appellants that the Examiner is relying upon his own subjective opinion. The reason why the Federal Circuit (*In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2000)) has required the Examiner to provide objective evidence is because it may be easy to conclude that it would be obvious to combine references using hindsight reasoning even though there is no motivation or suggestion to do so. One can usually find a reason to combine references or make modifications to the main reference. If that were all it took, then all inventions would be obvious and not patentable. For example, assuming that a wheelbarrow had never been developed and a patentee had claimed a wheelbarrow, if the main reference taught a cart with a shallow box body, and the secondary reference taught two wheels, then the Examiner could simply assert, using hindsight reasoning without providing objective evidence, that the motivation for combining the two references is so that the cart could be moved from place to place. Hence, the patentee could not obtain a patent on the wheelbarrow (even though one has never been developed) based on the Examiner's rationale for combining the references. Yet the Examiner has not provided any evidence that a person of ordinary skill in the art would have combined the references to make such a product. In hindsight, everything is obvious. It seems that a question that should be asked is why the invention (in this example a wheelbarrow) was not already developed. If it is so obvious, then it would seem it already would have been developed.

are permitted for particular requestors, and wherein the second data processing unit (B) includes a gateway component for comparing all operation requests on the first data processing unit (A) with the access control lists and only passing to the first data processing unit (A) those operation requests which are permitted for the respective requestors and discarding non-permitted operation requests" as recited in claim 4. As understood by Appellants, the Examiner admits that the combination of Nathanson and Richardson do not teach the above-cited claim limitations. Office Action (9/8/2006), page 11. As further understood by Appellants, the Examiner asserts that these limitations are well-known and that it would have been obvious to modify the combination of Nathanson and Richardson to include the above-cited claim limitations because of "the benefit of selective access control to the secure resources." *Id.* Appellants respectfully traverse.

Appellants traverse the assertion that the above-cited claim limitations are well known. Appellants had requested the Examiner to provide a reference that teaches all of the above-cited claim limitations pursuant to M.P.E.P. §2144.03. The Examiner, in turn, refused asserting that it is Appellants' burden to show to the contrary. Office Action (9/8/2006), pages 2-3. Appellants' do not have the initial burden to prove that the claimed invention is patentable. Instead, the Examiner has the burden of establishing a *prima facie* case of obviousness which includes providing a reference or combination of references that teaches or suggests all the claim limitations. M.P.E.P. §§2142-2143. The Examiner has not met that burden.

Appellants respectfully assert that the Examiner's use of Official Notice is inappropriate. The Examiner is only to use Official Notice for facts asserted to be well-known or to be common knowledge in the art that are capable of instant and unquestionable demonstration as being well-known. *In re Ahlert*, 424 Fd.2d 1088, 1091, 165 U.S.P.Q. 418, 420 (C.C.P.A. 1970); M.P.E.P. § 2144.03. In this case, the facts asserted to be well-known or to be common knowledge in the art are not capable of instant and unquestionable demonstration as being well-known. Further, it is not

appropriate for the Examiner to take Official Notice of facts without citing a prior art reference where the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known. *In re Ahlert*, 424 Fd.2d at 1091, 165 U.S.P.Q. 420-21; See also *In re Grose*, 592 Fd.2d 1161, 1167-68, 201 U.S.P.Q. 57, 63 (C.C.P.A. 1979). Further, it is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as principle evidence upon which a rejection was based. *In re Zurko*, 258 F.3d 1379, 1385, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001). Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 4.

In response to Appellants' above arguments, the Examiner asserts that comparing all operation requests with operations permitted for particular requestors is well known in the art and cites WindowsNT, Citrix and Oracle as examples. Office Action (9/8/2006), page 6. While comparing operation requests with operations permitted for particular requestors may be known in the art, claim 4 does not simply recite that limitation. Instead, claim 4 recites "wherein the second data processing unit (B) is adapted to store one or more access control lists defining which operation requests are permitted for particular requestors, and wherein the second data processing unit (B) includes a gateway component for comparing all operation requests on the first data processing unit (A) with the access control lists and only passing to the first data processing unit (A) those operation requests which are permitted for the respective requestors and discarding non-permitted operation requests". The Examiner cannot ignore claim language. All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); M.P.E.P. §2143.03. Since the Examiner has not cited to any passage in either Nathanson or Richardson as teaching the above-cited claim limitations or provided evidence that the above-cited claim limitations are well known in the art, the Examiner has not established a *prima facie* case of obviousness in rejecting claim 4. M.P.E.P. §2143.

Further, as stated above, the Examiner's motivation for modifying Nathanson and Richardson to include the above-cited claim limitations is "given the benefit of selective access control to the secure resources." The Examiner has not provided a source for his motivation for modifying Nathanson and Richardson to include the above-cited claim limitations. The motivation to modify Nathanson and Richardson must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Appellants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 4. *Id.*

Further, the Examiner's motivation does not provide reasons, that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitations of claim 4. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 4. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

2. Examiner's motivation to modify Nathanson with Richardson to incorporate the missing claim limitations of claims 1 and 10 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 1 and 10.

Most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore,

an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Nathanson does not teach "a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations" as recited in claim 1. Office Action (9/8/2006), page 10. The Examiner appears to also admit that Nathanson does not teach "storing a list of permitted operations which can be requested from the second data processing unit; comparing, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and only executing the permitted operations" as recited in claim 10. *Id.* The Examiner asserts that Richardson teaches the above-cited claim limitations. *Id.* The Examiner's motivation for modifying Nathanson with Richardson to include the above-cited claim limitations is "given the benefit of increased security." Office Action (9/8/2006), page 11. The Examiner cites column 4, lines 52-53 of Richardson as support for the

motivation. Office Action (9/8/2006), page 5. This motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 1-2, 4 and 10-11 as discussed below.

The Examiner's motivation ("given the benefit of increased security") does not provide reasons, as discussed further below, that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitations of claims 1 and 10. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-2, 4 and 10-11. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner cites column 4, lines 52-53 of Richardson as support for the Examiner's motivation. Richardson teaches that one of the unique features of the present invention is the ability to disable certain instructions for security reasons. Column 4, lines 52-53. Richardson further teaches that in some cases, instructions, such as table reads, can be disabled so that would-be crackers are unable to gain access to proprietary software stored in the program memory and/or the data memory. Column 4, lines 53-57. Hence, Richardson teaches the ability to disable certain instructions, such as table reads, for security reasons. How does disabling certain instructions, such as table reads, for security reasons provide reasons as to why one skilled in the art would modify Nathanson to include the missing claim limitations of claims 1 and 10? How does this relate to the purpose of Nathanson, which is to provide mobile automotive telemetry (column 1, lines 9-52)? What is the rationale connection between "a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations" (missing claim limitations of claim 1) and disabling certain instructions, such as table reads, for security reasons? What is the rationale connection between "storing a list of permitted operations which

can be requested from the second data processing unit; comparing, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and only executing the permitted operations" (missing claim limitations of claim 10) and disabling certain instructions, such as table reads, for security reasons? The Examiner's cited passage that supports the Examiner's motivation does not provide reasons as to why one skilled in the art would modify Nathanson to include the missing claim limitations of claims 1 and 10. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-2, 4 and 10-11. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, Nathanson addresses the problem of not being able to provide mobile automotive telemetry. Column 1, lines 9-52. The Examiner has not provided any reasons as to why one skilled in the art would modify Nathanson, which teaches providing mobile automotive telemetry, to: (1) have a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations; (2) store a list of permitted operations which can be requested from the second data processing unit; (3) compare, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and (4) only execute the permitted operations (missing claim limitations of Nathanson). The Examiner's motivation ("given the benefit of increased security") does not provide such reasoning.

The Examiner's motivation is simply a reason for disabling certain instructions, such as table reads. Column 4, lines 52-57. Why would the reason to modify Nathanson (whose purpose is to provide mobile automotive telemetry) to: (1)

have a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations; (2) store a list of permitted operations which can be requested from the second data processing unit; (3) compare, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and (4) only execute the permitted operations (missing claim limitations of Nathanson) be to disable certain instructions, such as table reads, for security purposes? Nathanson is not concerned with disabling certain instructions, such as table reads, for security purposes. The Examiner cannot completely ignore the teachings of Nathanson in concluding it would have been obvious to modify Nathanson to include the missing claim limitations of claims 1 and 10.<sup>2</sup> Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitations of claims 1 and 10. Accordingly, the

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<sup>2</sup> Appellants respectfully request Examiner Poltorak to respond to the following example. For example, suppose that the invention of a super soaker gun (essentially a plastic gun that shoots water) was never developed and an Applicant filed for a patent application on the super soaker gun. Applicant claims a plastic gun with a container of water that shoots water. The Examiner cites a primary reference that teaches a plastic gun that shoots darts and cites a secondary reference that teaches a plastic toy that contains a container of water. Since the primary reference does not teach a container filled with water, the Examiner cites the secondary reference as teaching this missing claim limitation. The secondary reference specifically states that the purpose of the container is to carry water. The Examiner then concludes that it would have been obvious to modify the primary reference with the secondary reference in order to carry water. The Examiner believes that he/she has established a *prima facie* case of obviousness since the Examiner has found a reason to have a container of water. However, the Examiner is completely ignoring the teaching of the primary reference. Why would one skilled in the art modify a plastic gun that shoots darts to have a container of water? This is the key question to answer. While having a container of water may be used to carry water, that is irrelevant as far as the purpose of the primary reference. Simply citing to a passage in the secondary reference that discusses the purpose of that secondary reference may not be sufficient evidence for an obviousness rejection. After all, surely there is a reason as to why the secondary reference teaches the missing claim limitation or else why would it include it? The Examiner must explain the connection between the teachings of the primary reference and the rationale of the secondary reference for including the missing claim limitation. Otherwise, everything can be deemed obvious and virtually nothing can be patented.



Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-2, 4 and 10-11. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

3. Examiner relies on a reference under 35 U.S.C. §103 that is not analogous prior art.

As stated above, the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts. M.P.E.P. §2143.01. In order to rely on a reference as a basis for rejection under 35 U.S.C. §103(a), the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445 (Fed. Cir. 1992). The Examiner cites the Nathanson and Richardson references in his rejection of claims 1-2, 4 and 10-11 under 35 U.S.C. §103(a). The Richardson reference addresses the problem of having a microcontroller that can be controlled, to some extent, by a user during operation of the microcontroller. Column 3, lines 59-61. Appellants, on the other hand, address the problem of hackers obtaining confidential information from the internal control units. Specification, page 2, lines 7-9. Hence, the Richardson reference is not in the same field as Appellants' endeavor and is not reasonably pertinent to solving the problem of hackers obtaining confidential information from the internal control units. As a result, the Richardson reference is not an analogous prior art and the Examiner has not established a *prima facie* case of obviousness in rejecting claims 1-2, 4 and 10-11. M.P.E.P. §2141.01; 2143.01.

B. Claims 3 and 5 are improperly rejected under 35 U.S.C. §103(a) as being unpatentable over Nathanson in view of Richardson and in further view of Serughett.

The Examiner has rejected claims 3 and 5 under 35 U.S.C. §103(a) as being unpatentable over Nathanson in view of Richardson and in further view of Serughett. Office Action (9/8/2006), page 12. Appellants respectfully traverse for at least the

reasons stated below.

1. Nathanson, Richardson and Serughett, taken singly or in combination do not teach or suggest the following claim limitations.
  - a. Claim 3 is patentable over Nathanson in view of Richardson and Serughett.

Appellants respectfully assert that Nathanson, Richardson and Serughett, taken singly or in combination, do not teach or suggest "wherein the first data processing unit (A) includes a static operating system environment and the gateway component of the first data processing unit (A) runs in the static operating system environment" as recited in claim 3. The Examiner relies upon Serughett as teaching the above-cited claim limitation. Office Action (9/8/2006), page 12. However, the Examiner has not cited to any particular passage in Serughett as allegedly teaching the above-cited claim limitation. Upon review of Serughett, Appellants did not locate any language that teaches the above-cited claim limitation. While Serughett teaches a kernel specification that defines a static configuration approach as well as teaches implementing the OSEK/VDX specification to automotive applications (Page 25), there is no language in Serughett that teaches a gateway component of a data processing unit that runs in the static operating system environment. The Examiner appears to assert that it is Appellants burden to show to the contrary. This is incorrect as explained above. The Examiner has the initial burden to establish a *prima facie* case of obviousness which includes providing a reference or combination of references that teaches or suggests all of the claim limitations. M.P.E.P. §§2142-2143. The Examiner has not met that burden by not citing to a reference that teaches the above-cited claim limitation. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 3, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants respectfully assert that Nathanson, Richardson and Serughett,

taken singly or in combination, do not teach or suggest "the first data processing unit (A) includes a Real Time Operating System; and the second data processing unit (B) includes means for performing authentication of requestors and a gateway component for comparing all operation requests sent to the first data processing unit (A) with access control lists and for passing to the first data processing unit (A) only those operation requests which are permitted for the respective requestors and discarding non-permitted operation requests" as recited in claim 5. The Examiner asserts that these limitations (except the aspect of a real-time operating system) are substantially equivalent to the limitations of claims 2-3 and therefore are similarly rejected. Office Action (9/8/2006), page 13. Appellants respectfully traverse. These are different limitations than the limitations of claims 2 and 3. Further, there is no language in the combination of Nathanson, Richardson and Serughett that teaches any of the above-cited claim limitations. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 5, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. Examiner's motivation to modify Nathanson with Serughett to incorporate the missing claim limitation of claim 3 is insufficient to establish a *prima facie* case of obviousness in rejecting claim 3.

As stated above, most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would

select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Nathanson does not teach "wherein the first data processing unit (A) includes a static operating system environment and the gateway component of the first data processing unit (A) runs in the static operating system environment" as recited in claim 3. Office Action (9/8/2006), page 12. The Examiner asserts that Serughett teaches the above-cited claim limitations. *Id.* The Examiner's motivation for modifying Nathanson with Serughett to include the above-cited claim limitations is "given the various benefit[s] disclosed by Serughett: reliability, minimal resource usage, highly efficient scheduling, etc." Office Action (9/8/2006), pages 12-13. The Examiner cites page 26 of Serughett as support for the Examiner's motivation. Office Action (9/8/2006), page 6. This motivation is insufficient to support a *prima facie* case of obviousness in rejecting claim 3 as discussed below.

The Examiner's motivation ("given the various benefit[s] disclosed by Serughett: reliability, minimal resource usage, highly efficient scheduling, etc.") does not provide reasons, as discussed further below, that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitation of claim 3. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 3. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

As stated above, the Examiner cites page 26 of Serughett as support for the Examiner's motivation. Serughett provides reasons as to why a customer should choose OSEK as an operating system. Page 26. How does providing reasons as to why a customer should choose OSEK as an operating system provide reasons as to why one skilled in the art would modify Nathanson to include the missing claim limitations of claim 3? How does this relate to the purpose of Nathanson, which is to provide mobile automotive telemetry (column 1, lines 9-52)? What is the rationale connection between "wherein the first data processing unit (A) includes a static operating system environment and the gateway component of the first data processing unit (A) runs in the static operating system environment" (missing claim limitations of claim 3) and providing reasons as to why a customer should choose OSEK as an operating system? The Examiner's cited passage that supports the Examiner's motivation does not provide reasons as to why one skilled in the art would modify Nathanson to include the missing claim limitations of claim 3. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 3. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, Nathanson addresses the problem of not being able to provide mobile automotive telemetry. Column 1, lines 9-52. The Examiner has not provided any reasons as to why one skilled in the art would modify Nathanson, which teaches providing mobile automotive telemetry, to have a first data processing unit (A) include a static operating system environment and the gateway component of the first data processing unit (A) run in the static operating system environment (missing claim limitations of Nathanson). The Examiner's motivation ("given the various benefit[s] disclosed by Serughett: reliability, minimal resource usage, highly efficient scheduling") does not provide such reasoning.

The Examiner's motivation is simply the selling points as to why a customer would want to purchase the OSEK. Why would the reason to modify Nathanson (whose purpose is to provide mobile automotive telemetry) to have a first data

processing unit (A) include a static operating system environment and the gateway component of the first data processing unit (A) run in the static operating system environment (missing claim limitations of Nathanson) be the selling points as to why a customer would want to purchase the OSEK? Nathanson is not necessarily concerned with a super-small kernel for deeply embedded applications. The Examiner cannot completely ignore the teachings of Nathanson in concluding it would have been obvious to modify Nathanson to include the missing claim limitations of claim 3. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Nathanson to include the missing claim limitations of claim 3. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 3. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

3. The Examiner has not presented a motivation for modifying Nathanson and Richardson with Serughett to include the claim limitation of claim 5.

The Examiner admits that Nathanson and Richardson, taken together, do not teach the aspect of a real time operating system in claim 5. Office Action (9/8/2006), page 13. The Examiner asserts that Serughett teaches such a real time operating system. *Id.* Appellants respectfully assert that the Examiner has not presented a motivation for modifying Nathanson to include the aspect of a real time operation system. In order to establish a *prima facie* case of obviousness, the Examiner must provide a suggestion or motivation to modify the reference or to combine reference teachings. M.P.E.P. §2142. Since the Examiner has not provided any motivation for modifying Nathanson with Serughett to incorporate the missing claim limitation of claim 5, the Examiner has not established a *prima facie* case of obviousness in rejecting claim 5. M.P.E.P. §2142.

- C Claims 7 and 8 are not properly rejected under 35 U.S.C. §103(a) as

being unpatentable over Bassett in view of Richardson.

The Examiner has rejected claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable over Bassett in view of Richardson. Office Action (9/8/2006), page 13. Appellants respectfully traverse for at least the reasons stated below.

1. Bassett and Richardson, taken singly or in combination, do not teach or suggest the following claim limitations.
  - a. Claim 7 is patentable over Bassett in view of Richardson.

Appellants respectfully assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "a second data processing unit connected to an external communications network such that operation requests can be received from the external network" as recited in claim 7. The Examiner cites element 15 of Bassett as teaching a second data processing unit. Office Action (9/8/2006), page 13. The Examiner further relies upon column 12, lines 41-57 and Figure 6 as teaching the above-cited claim limitation. *Id.* Appellants respectfully traverse.

Bassett instead teaches that element 15 corresponds to an automation system controller connected to the residence electrical wiring system. Column 5, lines 25-27. The Examiner must provide a basis in fact and/or technical reasoning to support the conclusion that an automation system controller, as taught in Bassett, inherently teaches a data processing system. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that an automation system controller, as taught in Bassett, inherently teaches a data processing system, and that it would be so recognized by persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143.

Further, Bassett instead teaches that the gas meter, water heater and furnace

are connected via their respective appliance interface modules. Column 12, lines 44-46. There is no language in the cited passage that teaches a second data processing unit. Neither is there any language in the cited passage that teaches a second data processing unit connected to an external communications network. Neither is there any language in the cited passage that teaches a second data processing unit connected to an external communications network such that operation requests can be received from the external network. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Additionally, regarding claim 7, Appellants respectfully assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "a gateway component for controlling communications across the link." The Examiner asserts that this limitation is inherently taught by Bassett. Office Action (9/8/2006), pages 13-14. Appellants respectfully traverse. The Examiner must provide a basis in fact and/or technical reasoning to support the conclusion that Bassett inherently teaches a gateway component for controlling communications across the link. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Bassett inherently teaches a gateway component for controlling communications across the link, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143

Appellants further assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation" as recited



in claim 7. The Examiner cites column 5, lines 49-59 of Richardson as teaching the above-cited claim limitation. Office Action (9/8/2006), page 14. Appellants respectfully traverse. As stated above, Richardson instead teaches that an enabler is arranged in between on of the lines of decoded instructions from the decoder that are input into the CPU. Column 5, lines 49-52. There is no language in the cited passage that teaches a gateway component limiting the operations which can be performed at the first data processing unit. Neither is there any language in the cited passage that teaches a gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit. Neither is there any language in the cited passage that teaches a gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "wherein the first and second data processing units and the link between them are implemented within a network-connected home environment" as recited in claim 7. The Examiner cites Figure 1 of Bassett as teaching the above-cited claim limitation. Office Action (9/8/2006), page 13. Appellants respectfully traverse. There is no language in the description of Figure 1 of Bassett that teaches first and second data processing units. Neither is there any language in the description of Figure 1 of Bassett that teaches first and second data processing units and the link between them are implemented within a network-connected home environment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit" as recited in claim 7. The Examiner cites column 9, lines 29-34 and 51-67; and Figure 15 of Bassett as teaching the above-cited claim limitation. Office Action (9/8/2006), page 13. Appellants respectfully traverse and assert that Bassett instead teaches that an appliance interface module would require an interface, a microprocessor and a device-specific interface. Column 9, lines 29-34. There is no language in the cited passages that teaches security-critical resources including security-critical devices within a home. Neither is there any language in the cited passages that teaches security-critical resources including security-critical devices within a home which are managed by application programs running on the first data processing unit. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- b. Claim 8 is patentable over Bassett in view of Richardson for at least the reasons that claim 7 is patentable over Bassett in view of Richardson.

Claim 8 recites combinations of features of independent claim 7, and thus claim 8 is patentable over Bassett in view of Richardson for at least the reasons that claim 7 is patentable over Bassett in view of Richardson.

- c. Claim 8 is patentable over Bassett in view of Richardson.

Appellants respectfully assert that Bassett and Richardson, taken singly or in combination, do not teach or suggest "wherein the external network is the Internet" as recited in claim 8. The Examiner asserts that the above-cited claim limitation is well known in the art. Office Action (9/8/2006), page 14. While the Internet itself is well known, Appellants respectfully traverse the assertion that it is well known in the art to

have a second data processing unit connected to an external communications network such that operation requests can be received from the external network, where the external network is the Internet. Appellants had requested the Examiner to provide a reference that teaches the above-cited claim limitation pursuant to M.P.E.P. §2144.03. However, the Examiner failed to provide such a reference.

Further, the Examiner states:

One would have been motivated to use them especially in light of the benefits of [the] Internet as evidence by Internet commercial success. Office Action (9/8/2006), page 14.

The Examiner has not provided an objective source for the motivation for modifying Bassett and Richardson to include the above-cited claim limitation. Instead, the Examiner is relying upon the Examiner's own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 8. *Id.*

2. The Examiner's motivation to modify Bassett with Richardson to incorporate the missing claim limitations of claims 7 is insufficient to establish a *prima facie* case of obviousness.

As stated above, most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner

claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Bassett does not teach "the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second data processing unit to only a predefined set of permitted operations" as recited in claim 7. Office Action (9/8/2006), page 14. The Office Action asserts that Richardson teaches the above-cited claim limitation. *Id.* The Examiner's motivation for modifying Bassett with Richardson to include the above-cited claim limitation is "given the benefit of increased security." *Id.* The Examiner's motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 7-8 as discussed below.

The Examiner has not provided a source for his motivation for modifying Bassett with Richardson to include the above-cited claim limitation. The motivation to modify Bassett with Richardson must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Appellants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation

is insufficient to support a *prima facie* case of obviousness for rejecting claims 7-8. *Id.*

Further, the Examiner's motivation (benefit of increased security) appears to have been gleaned only from Appellants' disclosure, such as for example on page 10, lines 4-19 of Appellants' Specification. Any judgment on obviousness must not include knowledge gleaned only from Appellants' disclosure. *In re McLaughlin*, 170 U.S.P.Q. 209, 212 (C.C.P.A. 1971). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7-8. M.P.E.P. §2145.

D     Claims 7 and 8 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Bassett in view of Pfleeger.

The Examiner has rejected claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable over Bassett in view of Pfleeger. Office Action (9/8/2006), page 14. Appellants respectfully traverse for at least the reasons stated below.

1.     Bassett and Pfleeger, taken singly or in combination, do not teach or suggest the following claim limitations.
  - a.     Claim 7 is patentable over Bassett in view of Pfleeger.

Appellants respectfully assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "a second data processing unit connected to an external communications network such that operation requests can be received from the external network" as recited in claim 7. The Examiner cites element 15 of Bassett as teaching a second data processing unit. Office Action (9/8/2006), page 15. The Examiner further relies upon column 12, lines 41-57 and Figure 6 as teaching the above-cited claim limitation. *Id.* Appellants respectfully traverse.

Bassett instead teaches that element 15 corresponds to an automation system controller connected to the residence electrical wiring system. Column 5, lines 25-27.

The Examiner must provide a basis in fact and/or technical reasoning to support the conclusion that an automation system controller, as taught in Bassett, inherently teaches a data processing system. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that an automation system controller, as taught in Bassett, inherently teaches a data processing system, and that it would be so recognized by persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143.

Further, Bassett instead teaches that the gas meter, water heater and furnace are connected via their respective appliance interface modules. Column 12, lines 44-46. There is no language in the cited passage that teaches a second data processing unit. Neither is there any language in the cited passage that teaches a second data processing unit connected to an external communications network. Neither is there any language in the cited passage that teaches a second data processing unit connected to an external communications network such that operation requests can be received from the external network. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "a gateway component for controlling communications across the link" as recited in claim 7. The Examiner asserts that this limitation is inherently taught by Bassett. *Id.* Appellants respectfully traverse. The Examiner must provide a basis in fact and/or technical reasoning to support the conclusion that Bassett inherently teaches a gateway component for controlling communications across the link. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must

make clear that Bassett inherently teaches a gateway component for controlling communications across the link, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143

Appellants further assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation" as recited in claim 7. The Examiner relies upon pages 427-434 of Pfleeger as teaching the above-cited claim limitation. Office Action (9/8/2006), page 15. Appellants respectfully traverse. Pfleeger instead teaches that a firewall is a process that filters all traffic between a protected or "inside" network and a less trustworthy or "outside" network. Page 428. There is no language in the cited passages that teaches a gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit. Neither is there any language in the cited passages that teaches a gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "wherein the first and second data processing units and the link between them are implemented within a network-connected home environment" as recited in claim 7. The Examiner relies upon Figure 1 of Bassett as teaching the above-cited claim limitation. Office Action (9/8/2006), page 15.

Appellants respectfully traverse. There is no language in the description of Figure 1 of Bassett that teaches first and second data processing units. Neither is there any language in the description of Figure 1 of Bassett that teaches first and second data processing units and the link between them are implemented within a network-connected home environment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit" as recited in claim 7. The Examiner cites column 9, lines 29-34 and 51-67; and Figure 15 of Bassett as teaching the above-cited claim limitation. Office Action (9/8/2006), page 15. Appellants respectfully traverse and assert that Bassett instead teaches that an appliance interface module would require an interface, a microprocessor and a device-specific interface. Column 9, lines 29-34. There is no language in the cited passages that teaches security-critical resources including security-critical devices within a home. Neither is there any language in the cited passages that teaches security-critical resources including security-critical devices within a home which are managed by application programs running on the first data processing unit. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 7, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- b. Claim 8 is patentable over Bassett in view of Pfleeger for at least the reasons that claim 7 is patentable over Bassett in view of Pfleeger.

Claim 8 recites combinations of features of independent claim 7, and thus



claim 8 is patentable over Bassett in view of Richardson for at least the reasons that claim 7 is patentable over Bassett in view of Richardson.

c. Claim 8 is patentable over Bassett in view of Pfleeger.

Appellants respectfully assert that Bassett and Pfleeger, taken singly or in combination, do not teach or suggest "wherein the external network is the Internet" as recited in claim 8. Office Action (9/8/2006), page 16. The Examiner asserts that the above-cited claim limitation is well known in the art. *Id.* While the Internet itself is well known, Appellants respectfully traverse the assertion that it is well known in the art to have a second data processing unit connected to an external communications network such that operation requests can be received from the external network, where the external network is the Internet. Appellants had requested the Examiner to provide a reference that teaches the above-cited claim limitation pursuant to M.P.E.P. §2144.03; however, the Examiner failed to provide such a reference.

Further, the Examiner states:

One would have been motivated to use them especially in light of the benefits of [the] Internet as evidence by Internet commercial success. Office Action (9/8/2006), page 14.

The Examiner has not provided an objective source for the motivation for modifying Bassett and Pfleeger to include the above-cited claim limitation. Instead, the Examiner is relying upon the Examiner's own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 8. *Id.*

2. The Examiner's motivation to modify Bassett with Pfleeger to incorporate the missing claim limitations of claims 7 is insufficient to establish a *prima facie* case of obviousness.

As stated above, most if not all inventions arise from a combination of old elements. See *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness

is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Bassett does not teach "the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second data processing unit to only a predefined set of permitted operations" as recited in claim 7. Office Action (9/8/2006), page 15. The Office Action asserts that Pfleeger teaches the above-cited claim limitation. *Id.* The Examiner's motivation for modifying Bassett with Pfleeger to include the above-cited claim limitation is "given the benefit of increased security." Office Action (9/8/2006), page 16. The Examiner's motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 7-8 as discussed below.

The Examiner has not provided a source for his motivation for modifying Bassett with Pfleeger to include the above-cited claim limitation. The motivation to

modify Bassett with Pfleeger must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Appellants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7-8. *Id.*

Further, the Examiner's motivation (benefit of increased security) appears to have been gleaned only from Appellants' disclosure, such as for example on page 10, lines 4-19 of Appellants' Specification. Any judgment on obviousness must not include knowledge gleaned only from Appellants' disclosure. *In re McLaughlin*, 170 U.S.P.Q. 209, 212 (C.C.P.A. 1971). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7-8. M.P.E.P. §2145.

VIII. CONCLUSION

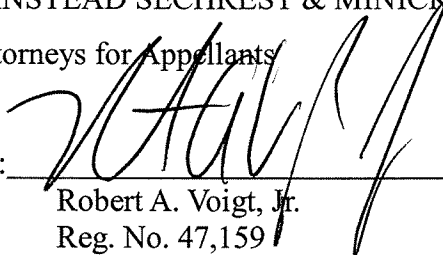
For the reasons noted above, the rejections of claims 1-5, 7-8 and 10-11 are in error. Appellants respectfully request reversal of the rejections and allowance of claims 1-5, 7-8 and 10-11.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

Attorneys for Appellants

By: \_\_\_\_\_

  
Robert A. Voigt, Jr.  
Reg. No. 47,159

P.O. Box 50784  
Dallas, Texas 75201  
(512) 370-2832

**CLAIMS APPENDIX**

1. A data processing apparatus for a vehicle, including:
  - a first data processing unit (A) connected to device control units of the vehicle;
  - a second data processing unit (B) connected to a communications apparatus providing a wireless connection to an external network, such that operation requests can be received at the second data processing unit (B) from the external network;
  - a data communications link between the first and second data processing units; and
  - a gateway component for controlling communications across the data communications link, the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations.
2. A data processing apparatus according to claim 1, wherein the first data processing unit (A) is adapted to store in an unmodifiable form a list of said predefined set of permitted operations and includes a gateway component for comparing all operation requests received from the second data processing unit (B) with the list of permitted operations, and then to pass the permitted operation requests to respective ones of said device control units and to discard non-permitted operation requests.
3. A data processing apparatus according to claim 2 wherein the first data processing unit (A) includes a static operating system environment and the gateway component of the first data processing unit (A) runs in the static operating system environment.
4. A data processing apparatus according to claim 1, wherein the second data processing unit (B) is adapted to store one or more access control lists defining which operation requests are permitted for particular requestors, and wherein the second

data processing unit (B) includes a gateway component for comparing all operation requests on the first data processing unit (A) with the access control lists and only passing to the first data processing unit (A) those operation requests which are permitted for the respective requestors and discarding non-permitted operation requests.

5. A data processing apparatus according to claim 1, wherein:  
the first data processing unit (A) includes a Real Time Operating System; and  
the second data processing unit (B) includes means for performing authentication of requestors and a gateway component for comparing all operation requests sent to the first data processing unit (A) with access control lists and for passing to the first data processing unit (A) only those operation requests which are permitted for the respective requestors and discarding non-permitted operation requests.

7. A data processing apparatus, including:  
a first data processing unit connected to one or more security-critical resources;  
a second data processing unit connected to an external communications network such that operation requests can be received from the external network;  
a data communications link between the first and second data processing units; and  
a gateway component for controlling communications across the link, the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation, wherein the first and second data processing units and the link between them are implemented within a network-connected home environment, and the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit.

8. A data processing apparatus according to claim 7, wherein the external network is the Internet.
10. A method for controlling the initiation of operations relating to secure resources on a first data processing unit such that only a limited predefined set of operations can be initiated by requests from a second data processing unit connected to the first data processing unit by a communications link, the method comprising:
- storing a list of permitted operations which can be requested from the second data processing unit;
  - comparing, by a secure gateway component which controls communications across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations; and
  - only executing the permitted operations.
11. A method according to claim 10, implemented within a vehicle which includes the first and second data processing units, wherein the secure resources include the vehicle's internal device control units.

**EVIDENCE APPENDIX**

No evidence was submitted pursuant to §§1.130, 1.131, or 1.132 of 37 C.F.R. or of any other evidence entered by the Examiner and relied upon by Appellants in the Appeal.



**RELATED PROCEEDINGS APPENDIX**

There are no related proceedings to the current proceeding.

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